

REMARKS

Favorable reconsideration is respectfully requested.

Claim 2 has been cancelled and the subject matter thereof has been incorporated into Claims 1, 10 and 11. Non-elected Claims 12-14 have been cancelled without prejudice to the filing of a divisional application.

The claimed invention is directed to a stretched film of a void-containing thermoplastic resin. As is described in paragraphs [0005]-[0006] of the present specification, such a film, if subject to electrostatic discharge during processing, will retain a residual charge due to the voids in the film. This disadvantageously resulted in a significant attractive force between the sheets, which makes it difficult to handle the sheets during feeding and removal from offset presses.

According to a feature of Claim 2 now set forth in Claims 1-11, the stretched film of a void containing thermoplastic resin has a surface charge potential, after discharging of the film, of -10 to 10 kV. This surface charge is achieved by applying a DC current voltage overlaid on a high voltage and high frequency voltage during discharging of the film, and maintains an attractive force between the sheets of the film of 50 grams or less.

Claim 2 had been rejected under 35 U.S.C. § 103 as being obvious over the PCT publication WO '601, as represented by U.S. patent 6,620,473 (Nishizawa et al). The Examiner there noted that Nishizawa et al teaches that the stretched film is subjected to corona discharge in order to improve printability, but does not teach a charge potential of from -10 to 10 kV on the surface after discharging the film. Nonetheless, the Examiner considered that the claimed charge potential would have been obvious to those skilled in the art as a matter of discovering the "optimum or workable ranges." This rejection, however, is respectfully traversed.

To begin with, as the Examiner has recognized, a charge potential of the film surface in Nishizawa et al would not inherently be -10 to 10 kV. Nishizawa et al is directed to a label for in-mold decorating, wherein the label is subjected to corona discharge processing to improve the printability of the surface thereof (column 7, lines 60-62). There is no description in Nishizawa et al of a desire to limit the surface charge potential, nor is there a description of a charge discharging step wherein a direct current voltage is overlaid on a high voltage of high frequency, and so there is no basis to allege that the residual charge from the corona discharge processing has been dissipated such that the charge potential of the film surface is inherently -10 to 10 kV.

As for the alleged obviousness of the claimed range of the charge potential of the film surface after discharging of the film, this cannot be dismissed simply as the discovery of an optimum or workable range. The Examiner is correct that In re Aller (M.P.E.P. § 2144.05(II)(A)) holds that the discovery of optimum or workable ranges by routine experimentation is not an inventive step. However, the selection of a range will not be the result of "routine experimentation" under In re Aller unless the particular parameter to be optimized is first recognized in the prior art to be a result effective variable. In re Antonie, 195 USPQ 6 (CCPA 1977); M.P.E.P. § 2144.05(II)(B). Here, there is no teaching in the prior art that the charge potential of the film surface should be optimized to achieve an advantageous result consistent with the claimed range. Without such a teaching, the discovery of the claimed range cannot be the result of routine experimentation, and the discovery of the advantageous effects of the claimed invention, as set forth below, comprises an inventive step.

Finally, even if the prior art were to teach that the charge potential of the film surface should be optimized to achieve an advantageous result consistent with the claimed range, any resulting *prima facie* case of obviousness is rebutted by a showing of criticality of the

claimed range. M.P.E.P. § 2144.05(III). Such evidence of criticality is present in the examples and in the description in paragraphs [00109]-[00111] in the present specification. More specifically, the Comparative Examples 1 and 2 described in paragraphs [0067]-[0069] lacked a step of superimposing a direct current voltage on the high voltage and high frequency discharge, and respectively produced residual surface charges of 40 kV or 30 kV. On the other hand, the stretched films according to the inventive examples 1-14 were produced by providing a charge discharging step wherein a direct current voltage is overlaid on a high voltage of high frequency, and had a residual surface charge in the claimed range. The feeding performance of the sheets was then tested using an offset press (paragraph [00104]).

As a result, it was confirmed (paragraphs [00109]-[00111]) that in the stretched films according to inventive Examples 1-14, the attractive force between sheets was small, and the feeding of the sheets on offset presses was excellent. Additionally, the stretched films of Examples 1-6, which had a heat seal property on the C layer, was confirmed to be suitably applicable to use in various types of heat sealing such as in-mold labeling or header labeling. On the other hand, the stretched films of the comparative examples adhered tightly to each other due to static electricity and were extremely inferior in feeding and emission from offset presses. Applicants respectfully submit that this comprises evidence of improved and unexpected results sufficient to establish the criticality of the claimed invention and thereby overcome any *prima facie* case of unpatentability.

Claim 2 was also rejected under 35 U.S.C. § 103 as being obvious over U.S. patent 5,552,001 (Lin). However, the above remarks also apply to this reference. Lin is directed to a process of forming three layer coextruded biaxial oriented polypropylene synthetic paper, in which the synthetic paper is subjected to a corona discharge to improve the printability of the surface of the film. Again, however, there is no disclosure in the reference of applying a

direct current voltage overlaid on a high voltage of high frequency in order to dissipate the resulting surface charge, and so the presently claimed surface charge is not inherent therein. Additionally, the claimed surface charge cannot be dismissed as the result of routine experimentation to discover an optimum or workable range since the reference lacks any description that the surface charge is a result effective variable (In re Antonie). This, combined with the evidence of improved and unexpected results set forth in the specification, clearly points to the unobviousness of the claims over Lin.

Claim 2 was also rejected under 35 U.S.C. § 103 as being obvious over EP '544. However, here again, there is no teaching that the surface potential is a result effective variable, and the specification provides evidence of improved and unexpected results. Therefore, the claims are also unobvious from this reference.

Concerning paragraphs 8 and 12 of the Office Action, the further reference to Burns et al was cited to teach a feature of the dependent claims, and provides no teaching for overcoming the shortcomings of the primary references with respect to amended Claim 1. Applicants therefore respectfully submit that the amended claims define over any combination of the above references.

Applicants believe that the present application is in a condition for allowance and respectfully solicit an early Notice of Allowability.

Respectfully submitted,

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